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1.0 PURPOSE

This policy is designed to provide guidance with regards to minimizing the effects of worker fatigue while also allowing flexibility among organizations (departments). It is consistent with CPCChem's commitment to Operational Excellence, the American Chemistry Council's Responsible Care® Management System, and OSHA's PSM Standard 29 CFR 1910.119.

This policy has been developed by S-Chem to reduce the potential for safety and process safety related incidents caused in whole or in part by work-related fatigue by ensuring:

- Management of consecutive hours at work.
- Time off after consecutive work days.
- Time off between work schedule-sets.

2.0 APPLICABILITY

Applies to S-Chem employees, Contractors (both short-term and long-term), Vendors, or others performing work at S-Chem facility in regards to work related fatigue considerations while performing job tasks.

3.0 REFERENCES/INTERFACING DOCUMENTS

- CPCChem Alertness Management Program - Best Practice EHS-6905
- Operational Excellence (O.E.) Element 3.8, Incident Prevention, Quality, and Reliability.
- Shift Work Policy (CP-1052).

4.0 DEFINITIONS

- 4.1 **Call Outs** – Any work period required outside of normal work hours that is not in alignment with a normal shift or work period. (Normally occurs within the technical & maintenance organization).
- 4.2 **Circadian Rhythms** – The innate biological clock that regulates sleep and waking and controls the daily ups and downs of physiologic processes, including body temperature, blood pressure, and the release of hormones.
- 4.3 **Extended Shift** – Any shift or work period lasting longer than the approved work schedule or shift.

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- 4.4 **Fatigue** – A condition characterized by a lessened capacity for work, reduced efficiency of accomplishment, and an increased human error rate. Fatigue is usually accompanied by a feeling of weariness and tiredness. Fatigue can be acute and come on suddenly or chronically and persists.
- 4.5 **Turnaround/Outage** – A normally-scheduled process unit shutdown for major maintenance work.
- 4.6 **Commissioning/Start-up** – A scheduled process unit start-up after major maintenance work or Project.
- 4.7 **Work Set (Shift CYCLE)** – Multiple consecutive calendar days of scheduled work.

5.0 RESPONSIBILITIES

- 5.1 **S-Chem Management** – responsible for the overall application of this policy. In addition, will be responsible for understanding the underlying principles of worker fatigue as outlined in this policy and associated training.
- 5.2 **Talent Management Department** – responsible for providing company sponsored information and training in support of the Alertness Management Program working in conjunction with Medical and EHS departments.
- 5.3 **S-Chem Clinic** - works with Talent Management and EHS Departments to ensure alertness and fatigue programs including training are provided to affected personnel.
- 5.4 **S-Chem and Corporate EHS** – The corporate EHS department will remain current in alertness recovery strategies and studies supporting these strategies.
- 5.5 **S-Chem Employees and Contractors** – Workers affected by this program will be trained to understand the underlying principles of fatigue and the principles of alertness recovery. In addition, they will be responsible for complying with applicable information within this company policy.
- 5.6 **Contractor Management** – responsible to ensure that similar Fatigue Management similar principles and policies are implemented to ensure same purpose is met.
- 5.7 **Human Resources** – advise Management on matters related to management of work related fatigue, and act as a liaison in case of violations related to this policy; in addition to, administering and ensuring the compliance of the policy.

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6.0 COMPANY POLICY

6.1 Worker Fatigue Management Program

6.1.1 Safety is a personal responsibility. All employees should report to work well rested and ready to work. Employees shall notify their supervisor immediately if fatigue signs and symptoms are identified that could potentially cause an unsafe working condition. The supervisor will identify what factors behind the fatigue and take necessary steps to have employee's work position covered (replaced) and ensure employee does not report back to work until fatigue issue has been resolved.

6.1.2 Symptoms and signs of work fatigue may include:

- Slowed reaction time.
- Reduced attention span.
- Poor decision making.
- Poor concentration and irritability.
- Falling asleep in upright position when not active.
- Continuous yawning, blurring of vision, and "heavy" dry eyes.
- Tiredness.
- Physical and mental exhaustion.
- Lack of motivation.
- Reduced or no energy.

6.1.3 Factors behind work fatigue may include the following:

- Physical activity.
- Emotional stress.
- Boredom.
- Lack of sleep.
- Consuming substantial amount of caffeine.
- Medication.

6.1.4 Work schedule guidelines to manage worker fatigue

6.1.4.1 For extended shifts greater than the approved schedule the following guidelines apply unless specifically addressed through exceptions in clause 6.1.7:

- Extended shifts at S-Chem are managed through an established approval process as outlined in the Shift Work Policy (CP-1052).

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- Extended shifts\schedules should not exceed 4 hours greater than the approved work schedule. (Including time for appropriate work turnover).
- Employees on call out or extended shifts should not exceed a combined total of 16 work hours during a 24 hour period.
- A rest period of at least 8 hours away from the facility should be provided after an extended shift or call out.
- There should be a minimum of 24 hours off after a work set.
- Consecutive days worked should not exceed 13 consecutive calendar days followed by a minimum 1 day off.

6.1.5 Contractors (Base load\Long-term) are required to follow similar worker fatigue management practices as outlined in this Policy. Third Party Contractors (Short-term) working at S-Chem for a short-term duration will be provided guidance related to this policy through their Contracts and be requested to follow similar programs to ensure adequate rest away from work.

6.1.6 Safety critical events (e.g., turnarounds, commissioning, and startups) shall be managed to minimize the impacts of fatigue on the safety of the operation. Safety critical event countermeasures shall include “pre-planning” to ensure adequate rest to employees prior to the event, additional staffing for the event, and work-rest periods built into the planning and scheduling of the event to ensure adequate time off. Nonetheless, Environment, Health and Safety Department shall be approached for consultation of issues related to safety.

6.1.7 Exceptions to this Policy (special circumstances).

6.1.7.1 For unexpected events (short-term) where extended work is required, the line Supervisor in conjunction with the area Manager and/or their designee will agree on the interim plan to complete the work (specific job) in normal working hours. After working hours Shift Superintendant can approve it.

6.1.7.2 Exceptions related to longer duration extended work, the affected General Manager(s) (GM) is to review the shift or schedule change requests with Human Resources and obtain the appropriate approval in writing prior to execution of the

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change(s). Working times, affected groups, and durations (start and extent of circumstance) shall be documented.

6.2 Worker Fatigue Countermeasures

6.2.1 S-Chem will ensure that employees are provided with annual training to minimize the risks associated with shift work and extended hours through computer based training. Training will include reference to the following:

- Circadian rhythms and their relationship to work scheduling.
- Safety and health impacts for working extended hours.
- Strategies to fight and manage fatigue:
 - Improve Sleeping cycle.
 - Relaxation, Meditation and Regular Exercise.
 - Nutrition (Regular eating schedule, light meals during shift, hydration, carbohydrates at end of shift, and minimization of spicy foods.
 - Coping with the proper work environment which includes: bright lights, minimization of nicotine, and minimization of loud noises.
 - Reduce nicotine, caffeine and increase fluid intake.

6.2.2 Fatigue factors are also incorporated into incident investigations as a potential cause or factor in the root cause analysis through S-Chem formal incident investigation techniques.

7.0 TRAINING

- 7.1 Delivered to all employees and Baseload\Longterm contractors annually through LMS Learning Plans.
- 7.2 S-Chem Fatigue Policy will be communicated to Short-term contractors through the Contracts' department, in addition to pre-job planning for turnarounds and other critical activities implemented in the Safety Orientation.

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8.0 AUDITING

- 8.1 Random audits (samples) should be scheduled during planned turnarounds, outages, and commissioning activities by line management to ensure that the elements in this policy are being followed by each work group including Contractors on short-term assignment in the facility.

9.0 DOCUMENTATION

- 9.1 On-line LMS Training Records maintained through the Talent Management Department.

10.0 APPENDIX/ATTACHMENTS

- 10.1 N/A